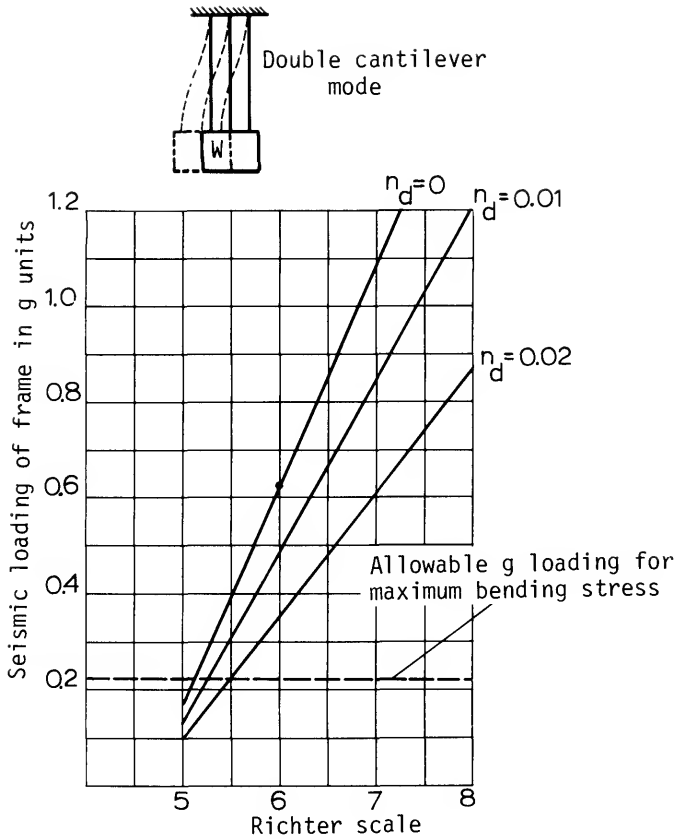

Fig. 12.3 Seismic loading on space frame in double-cantilever mode.

5. For the selected spectral velocity chart approximating, for example, the El Centro type of record (Fig. 12.4) and the relevant numerical value of periods calculated in step 4, the required velocities can be obtained from the appropriate curves. In this instance we take the following:

$$S_v = 15 \text{ in./sec} \quad \text{(single cantilever)}$$
$$S_v = 25 \text{ in./sec} \quad \text{(double cantilever)}$$

6. The spectral velocity chart given in Fig. 12.4 has been sketched in very roughly for the purpose of illustration only. In actual design situations, engineers should consult more precise seismological data [52].

   The required formulas for the calculation of g loading corresponding to a particular bending mode of the system given for this example can be